

**MISSOURI DEPARTMENT OF TRANSPORTATION
BID GUIDELINES AND DOCUMENTATION
FOR PURCHASES \$25,000.00 AND OVER**

THIS IS NOT AN ORDER

REQUEST FOR BID

It is the vendor's responsibility to read and comply with all conditions, specifications, and instructions outlined in this document. This document and any subsequent attachments shall supersede all confirmation forms, receipts, or any other paperwork needed to secure materials, equipment, or services.

TODAY'S DATE: JUNE 27, 2006	BID DUE BY (DATE AND TIME): JULY 12, 2006 @ 1:00 PM	F.O.B. REQUIREMENTS: DESTINATION (SEE DELIVERY LOCATION(S) BELOW)
TO BE COMPLETED: OCTOBER 15 – NOVEMBER 15, 2006	BID # D206-072-RN THIS BID # SHOULD BE REFERENCED ON ALL MAILING LABELS, ENVELOPES, AND ANY OTHER CORRESPONDENCE.	BUYER NAME: JASON MILHOLLIN PROCUREMENT AGENT PHONE NUMBER: (660)-385-8243
District Mailing Address: Missouri Department of Transportation – District 2 General Services (Procurement) Division 902 North Missouri Street P.O. Box 8 Macon, MO. 63552		Project Locations: Various sections of Highway 63 North of Macon, MO and near Atlanta, MO.

SCOPE OF WORK

Labor and Materials to Plant Living Winter Snow Fence along right-of-way on Highway 63 near Atlanta, MO. The Winter Snow Fence will consist of several sections varying in length with the total of all the sections measuring approximately 2 1/4 miles. The Snow Fence will consist of 400 Wild Plum, 200 Eastern Red Cedar, and 200 Cleveland Pear trees. The trees are to be 4-5 feet tall not including the root ball. Trees will be planted in a single row along the right-of-way and spaced 15 feet apart. The planting sequence of the three tree species will be determined by the MoDOT Roadsides Supervisor at the beginning of project. The trees are to be guaranteed to have 100% survival rate for the 1st year following planting. All trees not surviving the initial one-year period will be replaced by the awarded contractor at no additional charge. No lane closures will be required to enable the contractor to perform the work, but it is likely that the contractor will have to park equipment on the shoulder. The contractor will be responsible for setting up the work zone as outlined by attached drawing # TA-3.

PROJECT COST

\$

VENDOR NAME:

(Please enter your company name in this block)

CERTIFICATE OF GOOD STANDING

The Bidder must be in compliance with the laws regarding conducting business in the State of Missouri. Within ten (10) business days of notification, the Bidder will need to provide a copy of his/her Missouri Secretary of State's "Certificate of Good Standing" prior to the issuance of any contract or initial purchase order by the Missouri Department of Transportation (MoDOT). MoDOT reserves the right, at its sole discretion, to extend the date this documentation must be provided. The Bidder's inability to provide this documentation will result in his/her bid being rejected.

HB600 COMPLIANCE

The Bidder must be in compliance with the laws regarding conducting business in the State of Missouri. The Bidder should ensure they are in good standing with the Missouri Department of Revenue. Prior to award MoDOT staff will check with the Missouri Department of Revenue to ensure compliance with the provisions of HB600. If necessary a "Certificate of No Tax Due" may be requested of the successful Bidder. If such a certificate is requested, the Bidder's inability to provide this documentation will result in his/her bid being rejected.

SPECIAL TERMS AND CONDITIONS

Insurance / Certificate of Insurance Requirements

The Contractor shall purchase and maintain such insurance as will protect him from claims under workmen's compensation acts and other employee benefit acts, from claims for damages because of bodily injury, including death, and from claims for damages to property which may arise out of or result from the Contractor's operation under this Contract, whether such operations be by himself or by any Subcontractor or anyone directly or indirectly employed by any of them.

This insurance shall be written for not less than any limits of liability specified as part of this contract, or required by law, whichever is greater and shall include contractual liability insurance as applicable to the Contractor's obligations under this contract. **Unless other specified insurance limits shall be as follows:**

- 1) Workmen's Compensation: Workers Compensation Insurance, including "Occupational Disease Act" requirements, must be maintained **if** required by law.
- 2) Public Liability (includes property damage and personal injury):
 - a) Not less than **\$400,000** for any one person in a single accident or occurrence.
 - b) Not less than **\$2,000,000** for all claims arising out of a single occurrence.
- 3) Special Hazard Insurance: As required.
- 4) Builder's Risk: Not less than the full Contract amount.

Within ten (10) business days of notification, the Bidder will need to provide a copy of his/her Certificate of Insurance showing coverage, in the amounts required above, prior to the issuance of any contract or initial purchase order by the Missouri Department of Transportation (MoDOT). MoDOT reserves the right, at its sole discretion, to extend the date this documentation must be provided. The Bidder's inability to provide this documentation will result in his/her bid being rejected. MoDOT shall be listed as a "Certificate Holder" on the Certificate of Insurance with the following mailing address:

Missouri Department of Transportation – District 2
General Services (Procurement) Division
902 North Missouri Street P.O. Box 8
Macon, MO. 63552

Award

Award of this bid/quote/proposal will be made on an "All Or Nothing" basis using the "lowest and best" principle of award.

PREFERENCE IN PURCHASING PRODUCTS

DATE: _____

The bidders attention is directed to Section 34.076 RsMO 1986 which gives preference to Missouri corporations, firms, and individuals when letting contracts or purchasing products.

Bids/Quotations received will be evaluated on the basis of this legislation.

All vendors submitting a bid/quotation must furnish ALL information requested below.

FOR CORPORATIONS:

State in which incorporated: _____

FOR OTHERS:

State of domicile: _____

FOR ALL VENDORS:

List address of Missouri offices or places of business:

THIS SECTION MUST BE COMPLETED AND SIGNED:

FIRM NAME: _____

ADDRESS: _____

CITY: _____ **STATE:** _____ **ZIP:** _____

BY (signature required): _____

Federal Tax I.D. #: _____ **if no Federal Tax I.D. # - list Social Security #:** _____

NOTE: For bid/quotation to be considered, the "Preference in Purchasing Products" form must be on file in the General Services (Procurement) Division and must be dated in the current calendar year.

MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT

The bidder's attention is directed to the Missouri Domestic Products Procurement Act, Sections 34.350 to 34.359, RsMO, which requires all manufactured goods or commodities used or supplied in the performance of this contract or any subcontract to be manufactured or produced in the United States.

Section 34.355, RsMO, requires the vendor or contractor to certify his compliance with Section 34.353 and, if applicable, Section 34.359, RsMO, at the time of bidding **and** prior to payment. Failure to comply with Section 34.353, RsMO, during the performance of the contract **and** to provide certification of compliance prior to payment will result in nonpayment for those goods or commodities.

Section 34.353.2, RsMO, specifies that it does not apply where the total contract is less than Twenty-Five Thousand Dollars (\$25,000.00). If your total bid is Twenty-Five Thousand Dollars (\$25,000.00) or more, you **must** complete this form as directed below.

Failure to complete and return this document with this bid will cause the State to presume the manufactured goods or products listed in the bid are not manufactured or produced in the United States, and the bid will be evaluated on that basis. Please read the certification appearing below on this form.

- [] If all the goods or products specified in the attached bid which the bidder proposes to supply to the State shall be manufactured or produced in the "United States" as defined in Section 34.350, RsMO, check the box at left.
- [] If only one item of any particular goods or products specified in the attached bid is manufactured or produced in the "United States" as defined in Section 34.350, RsMO, check the box at left and list the items (or item number) here:

- [] If any or all of the goods or products specified in the attached bid which the bidder proposes to supply to the State are **not** manufactured or produced in the "United States" as defined in Section 34.350, RsMO, then: (a) check the box at left; (b) list below, by item (or item number), the country other than the United States where each good or product is manufactured or produced; and (c) check the boxes to the left of the paragraphs below if applicable and list the corresponding items (or item numbers) in the spaces provided.

Item (or item number)	Location Where Item Manufactured or Produced

(attach an additional sheet if necessary)

- [] The following specified goods or products cannot be manufactured or produced in the United States in sufficient quantities or in time to meet the contract specifications. Items (or item numbers): _____

- [] The following specified goods or products must be treated as manufactured or produced in the United States, in accordance with an existing treaty, law, agreement, or regulation of the United States, including a treaty between the United States and any foreign country regarding export-import restrictions or international trade. Items (or item numbers): _____

CERTIFICATION

By submitting this document, completed as directed above, with a bid, the bidder certifies under penalty of making false declaration (Section 575.060, RsMO) that the information contained in this document is true, correct and complete, and may be relied upon by the State in determining the bidders qualifications under and in compliance with the Missouri Domestic Products Procurement Act.

The bidder's failure to complete and return this document with the bid as directed above will cause the State to presume the manufactured goods or products listed in the bid are not manufactured or produced in the United States, and the bid will be evaluated on that basis pursuant to Section 34.353.3(2), RsMO.

VENDOR NOTES

Missouri Department of Transportation purchase orders must be issued to the invoicing company/address. If the invoicing company/address will be different from that listed in the vendor information section (below), the vendor should specify the "remit to" company/address in the vendor notes section (above).

VENDOR INFORMATION

Vendor Name/Mailing Address:	Vendor Contact Information (including area codes):
	Phone #:
	Cellular #:
Email Address:	Fax #:
Printed Name and Title of Responsible Officer or Employee:	Signature:
Is your company registered/certified with the State of Missouri as a (please circle):	
MINORITY BUSINESS ENTERPRISE (MBE) ? YES NO	
WOMEN BUSINESS ENTERPRISE (WBE) ? YES NO	
Would your company like information on becoming a registered/certified MBE/WBE vendor? YES NO	

All responses to this Request For Bid should be submitted on this form and ALL pages should be returned to the Buyer listed above at the District mailing address shown.

Note: If any of the "Standard Solicitation Provisions" and "General Terms and Conditions" on the following pages conflict with the requirements outlined in this Request For Bid, the RFB requirements will supersede those below.

STANDARD SOLICITATION PROVISIONS

- a. The Missouri Department of Transportation (MoDOT) reserves the right to reject any or all bids/quotes/proposals, and to accept or reject any items thereon, and to waive technicalities. In case of error in the extension of prices in the bid/quote/proposal, unit prices will govern.
- b. All bids/quotes/proposals must be signed with the firm name and by a responsible officer or employee. Obligations assumed by such signature must be fulfilled.

- c. By virtue of statutory authority, a preference will be given to materials, products, supplies, provisions and all other articles produced, manufactured, made or grown, within the State of Missouri.
- d. Time of delivery is a part of the consideration and, if not otherwise stated in the solicitation documents, must be stated in definite terms by the Bidder/Offeror and must be adhered to. If time varies on different items, the Bidder/Offeror shall so state.
- e. If providing bids/quotes/proposals for commodities, the Bidder/Offeror will state brand or make on each item. If bidding or proposing other than the make, model or brand specified, the manufacturer's name, model number or catalog number must be given.
- f. **For bids/proposals of \$25,000 or more**, no bids/proposals by telephone, telegram or telefax will be accepted. If provided, these bids/proposals should be returned in the MoDOT solicitation return envelope.
- g. If a solicitation return envelope is provided by MoDOT, the bid/quote/proposal should be returned in the envelope provided with the Bid/RFQ/RFP Request Number plainly indicated thereon.
- h. The date specified for the returning of bids/quotes/proposals is a firm deadline and all bids/quotes/proposals must be received at the designated office by that time. The Department does not recognize the U.S. Mail, Railway Express Agency, Air Express, or any other organization, as its agent for purposes of accepting proposals. All proposals arriving at the designated office after the deadline specified will be rejected.

GENERAL TERMS AND CONDITIONS

General Performance

- a. This work is to be performed under the general supervision and direction of the Missouri Department of Transportation (MoDOT) and, if awarded any portion of the work, the Contractor agrees to furnish at his own expense all labor and equipment required to complete the work, it being expressly understood that this solicitation is for completed work based upon the price(s) specified and is not a solicitation for rental of equipment or employment of labor by MoDOT, and MoDOT is to have no direction or control over the employees used by the Contractor in performance of the work.

Deliveries

- a. Unless otherwise specified on the solicitation documents or purchase order, suppliers shall give at least 24 hours advance notice of each delivery. Delivery will only be received between the hours of 8:00 a.m. to 3:00 p.m., Monday through Friday. Material arriving after 3:00 p.m. will not be unloaded until the following workday. No material will be received on Saturday, Sunday or state holidays.
- b. If the prices bid herein include the delivery cost of the material, the Contractor agrees to pay all transportation charges on the material as FOB - Destination. Freight costs must be included in the unit price bid and not listed as a separate line item.
- c. Any demurrage is to be paid by the Contractor direct to the railroad or carrier.

Nondiscrimination

- a. The Bidder/Offeror understands that this project involves state funds and the Bidder/Offeror awarded the contract will be required to comply with the Executive Order 05-30 of the Governor of the State of Missouri dated September 8, 2005. This order stipulates that there shall be no discriminatory employment practices by the Contractor or his subcontractors, if any, based on race, sex, religion, national origin, age, color, disability, or veteran status. The undersigned Contractor or his subcontractors, if any, shall give written notice of their commitments under this clause to any labor union with which they have bargaining or other agreements.
- b. The Contractor shall comply with the Regulations relative to nondiscrimination in federally-assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- c. All solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of the Contractor's obligations under this contract and the Regulations, will be relative to nondiscrimination on the grounds of race, color, or national origin.
 - 1) Sanctions for Noncompliance: In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, MoDOT shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
 - i. withholding of payments to the Contractor under the contract until the Contractor complies, and/or,
 - ii. cancellation, termination or suspension of the contract, in whole or in part.

Contract/Purchase Order

- a. By submitting a bid/quote/proposal, the Bidder/Offeror agrees to furnish any and all equipment, supplies and/or services specified in the solicitation documents, at the prices quoted, pursuant to all requirements and specifications contained therein.
- b. A binding contract shall consist of: (1) the solicitation documents, amendments thereto, and/or Best and Final Offer (BAFO) request(s) with any changes/additions, (2) the Contractor's proposal and/or submitted pricing, and (3) the MHTC's acceptance of the proposal and/or bid by purchase order.
- c. A notice of award does not constitute an authorization for shipment of equipment or supplies or a directive to proceed with services. Before providing equipment, supplies and/or services, the Contractor must receive a properly authorized purchase order and/or notice to proceed.

- d. The contract expresses the complete agreement of the parties and performance shall be governed solely by the specifications and requirements contained therein. Any change, whether by modification and/or supplementation, must be accomplished by a formal contract amendment signed and approved by and between the duly authorized representative of the Contractor and the duly authorized representative of the MHTC, by a modified purchase order prior to the effective date of such modification. The Contractor expressly and explicitly understands and agrees that no other method and/or no other document, including correspondence, acts, and oral communications by or from any person, shall be used or construed as an amendment or modification.

Subcontracting

- a. It is specifically understood that no portion of the material or any interest in the contract, shall be subcontracted, transferred, assigned or otherwise disposed of, except with the written consent of MoDOT. Request for permission to subcontract or otherwise dispose of any part of the work shall be in writing to MoDOT and accompanied by a showing that the organization which will perform the work is particularly experienced and equipped for such work.
- b. Consent to subcontract or otherwise dispose of any portion of the work shall not be construed to relieve the Contractor of any responsibility for the production and delivery of the contracted work and the completion of the work within the specified time.
- c. All payments for work performed by a subcontractor shall be made to the Contractor to whom the contract was awarded and the purchase order issued.

Invoicing and Payment

- a. MoDOT is exempt from paying Missouri Sales Tax, Missouri Use Tax and Federal Excise Tax. However, the Contractor may themselves be responsible for the payment of taxes on materials they purchase to fulfill the contract. A Federal Excise Tax Exemption Certificate will be furnished to the successful Bidder/Offeree upon request.
- b. Each invoice should be itemized in accordance with items listed on the purchase order and/or contract. The statewide financial management system has been designed to capture certain receipt and payment information. Therefore, each invoice submitted must reference the purchase order number and must be itemized in accordance with items listed on the purchase order. Failure to comply with this requirement may delay processing of invoices for payment.
- c. Unless otherwise provided for in the solicitation documents, payment for all equipment, supplies, and/or services required herein shall be made in arrears. The Missouri Highways and Transportation Commission (MHTC) shall not make any advance deposits.
- d. The MHTC assumes no obligation for equipment, supplies, and/or services shipped or provided in excess of the quantity ordered. Any authorized quantity is subject to the MHTC's rejection and shall be returned at the Contractor's expense.
- e. The MHTC reserves the right to purchase goods and services using the state purchasing card.

Applicable Laws and Regulations

- a. The contract shall be construed according to the laws of the State of Missouri. The Contractor shall comply with all local, state, and federal laws and regulations related to the performance of the contract.
- b. The Contractor must be registered and maintain good standing with the Secretary of State of the State of Missouri and other regulatory agencies, as may be required by law or regulations. Prior to the issuance of a purchase order and/or notice to proceed, the Contractor may be required to submit to MoDOT a copy their current Authority Certificate from the Secretary of State of the State of Missouri.
 - 1) Prior to the issuance of a purchase order and/or notice to proceed, all **out-of-state** Contractors **providing services** within the state of Missouri must submit to MoDOT a copy of their current Transient Employer Certificate from the Department of Revenue, in addition to a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.
- c. The exclusive venue for any legal proceeding relating to or arising, out of the contract shall be in the Circuit Court of Cole County, Missouri.

Preferences

- a. In the evaluation of bids/quotes/proposals, preferences shall be applied in accordance with Chapter 34 RsMO. Contractors should apply the same preferences in selecting subcontractors.
- b. By virtue of statutory authority, RsMO. 34.076 and 34.350 to 34.359, a preference will be given to materials, products, supplies, provisions and all other articles produced, manufactured, made or grown within the State of Missouri. Such preference shall be given when quality is equal or better and delivered price is the same or less.
 - 1) The attachment entitled **"PREFERENCE IN PURCHASING PRODUCTS"** must be completed and returned with the solicitation documents.
 - 2) The attachment entitled **"MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT"** must be completed and returned with the solicitation documents. **Applies if bid is Twenty-Five Thousand Dollars (\$25,000.00) or more**
- c. In the event of a tie of low bids, the MHTC reserves the right to establish the method to be used in determining the award

Remedies and Rights

- a. No provision in the contract shall be construed, expressly or implied a waiver by the MHTC of any existing or future right and/or remedy available by law in the event of any claim by the MHTC of the Contractor's default or breach of contract.
- b. The Contractor agrees and understands that the contract shall constitute an assignment by the Contractor to the MHTC of all rights, title and interest in and to all causes of action that the Contractor may have under the antitrust laws of the United States or State of Missouri

for which causes of action have accrued or will accrue as the result of or in relation to the particular equipment, supplies, and/or services purchased or produced by the Contractor in the fulfillment of the contract with the MHTC.

- c. In the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request MoDOT to enter into such litigation to protect the interests of the MHTC, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

Cancellation of Contract

- a. The MHTC may cancel the contract at any time for a material breach of contractual obligations or for convenience by providing the Contractor with written notice of cancellation. Should the MHTC exercise its right to cancel the contract for such reasons, cancellation will become effective upon the date specified in the notice of cancellation sent to the Contractor.
- b. If the MHTC cancels the contract for breach, the MHTC reserves the right to obtain the equipment, supplies, and/or services to be provided pursuant to the contract from other sources and upon such terms and in such manner as the MHTC deems appropriate and charge the Contractor for any additional costs incurred thereby.

Bankruptcy or Insolvency

- a. Upon filing for any bankruptcy or insolvency proceeding by or against the Contractor, whether voluntary or involuntary, or upon the appointment of a receiver, trustee, or assigned the benefit or creditors, the Contractor must notify MoDOT immediately. Upon learning of any such actions, the MHTC reserves the right, at its sole discretion, to either cancel the contract or affirm the contract and hold the Contractor responsible for damages.

Inventions, Patents, and Copyrights

- a. The Contractor shall defend, protect, and hold harmless the MHTC, its officers, agents, and employees against all suits of law or in equity resulting from patent and copyright infringement concerning the Contractor's performance or products produced under the terms of the contract.

Inspection and Acceptance

- a. No equipment, supplies, and/or services received by MoDOT pursuant to a contract shall be deemed accepted until MoDOT has had reasonable opportunity to inspect said equipment, supplies, and/or services.
- b. All equipment, supplies, and/or services which do not comply with the specifications and/or requirements or which are otherwise unacceptable or defective may be rejected. In addition, all equipment, supplies, and/or services which are discovered to be defective or which do not conform to any warranty of the Contractor upon inspection (or at any later time if the defects contained were not reasonably ascertainable upon the initial inspection) may be rejected.
- c. The MHTC reserves the right to return any such rejected shipment at the Contractor's expense for full credit or replacement and to specify a reasonable date by which replacements must be received.
- d. The MHTC's right to reject any unacceptable equipment, supplies, and/or services shall not exclude any other legal, equitable or contractual remedies the MHTC may have.

Warranty

- a. The Contractor expressly warrants that all equipment, supplies, and/or services provided shall: (1) conform to each and every specification, drawing, sample or other description which was furnished to or adopted by MoDOT, (2) be fit and sufficient for the purpose expressed in the solicitation documents, (3) be merchantable, (4) be of good materials and workmanship, and (5) be free from defect.
- b. Such warranty shall survive delivery and shall not be deemed waived either by reason of the MHTC's acceptance of or payment for said equipment, supplies, and/or services.

Status of Independent Contractor

- a. The Contractor represents itself to be an independent Contractor offering such services to the general public and shall not represent itself or its employees to be an employee of the MHTC. Therefore, the Contractor shall assume all legal and financial responsibility for taxes, FICA, employee fringe benefits, workers' compensation, employee insurance, minimum wage requirements, overtime, etc., and agrees to indemnify, save and hold the MHTC, its officers, agents and employees harmless from and against any and all losses (including attorney fees) and damage of any kind related to such matter.

Indemnification

- a. The Contractor shall be responsible for injury or damages as a result of any services and/or goods rendered under the terms and conditions of this Agreement.
- b. In addition to the liability imposed upon the Contractor on the account of personal injury, bodily injury, including death, or property damage, suffered as a result of the Contractor's performance under this Agreement, the Contractor assumes the obligation to save harmless the Commission, including its agents, employees and assigns, and to indemnify the Commission, including its agents, employees and assigns, from every expense, liability or payment arising out of such wrongful or negligent act or omission, including legal fees.
- c. The Contractor also agrees to hold harmless the Commission, including its agents, employees, and assigns, from any wrongful or negligent act or omission committed by any subcontractor or other person employed by or under the supervision of the Contractor for any purpose under this Agreement, and to indemnify the Commission, including its agents, employees or assigns, from every expense, liability or payment arising out of such wrongful or negligent act or omission.

**IF NOT SUBMITTING A BID, PLEASE COMPLETE AND RETURN
THE FOLLOWING “NO BID FORM” TO ASSIST THE
PROCUREMENT STAFF IN OUR PROCESS EVALUATIONS.**

THANK YOU

NO BID

DATE: _____

TO: Missouri Department of Transportation – District 2
General Services (Procurement) Division
902 North Missouri Street P.O. Box 8
Macon, MO. 63552
(660)-385-1707 – fax #

FROM: _____

Our company is submitting “NO BID” on RFB # _____ for the reason(s) indicated below:

- () Product of service is not available or cannot meet the required specifications
- () Other obligations – cannot make required deadline
- () The delivery point or work location is outside of our territory or coverage/service area
- () Other – Please explain below:

Company Contact Person: _____ Phone # _____







- () Please keep our name on the bidder’s list for future opportunities on this product or service.
- () Please remove our name for your bidder’s list for this product or service.

**FAILURE TO RETURN A BID OR THIS FORM MAY RESULT IN
REMOVAL FROM OUR VENDOR DATABASE FOR FUTURE OPPORTUNITIES**

Shoulder Work on Divided Highways

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL BUFFER LENGTH (ft.) (B)	CHANNELIZER SPACING (ft.)	
	Undivided (S)	Divided (S)	Shoulder ¹ (T1)	Lane ² (T2)		Tapers	Buffer/ Work Areas
0-35	-	200	70	-	120	35	50
40-45	-	500	150	-	220	40	100
50-55	-	1000	185	-	335	50	100
60-70	-	1000	235	-	550	60	100
¹ Shoulder taper length based on 10 ft. (standard shoulder width) offset ² Lane taper length based on 12 ft. (standard lane width) offset							

TYPE ROADWAY	SIGN HEIGHT	MAXIMUM WORK ZONE LENGTH (L)
URBAN	1' Portable 7' Post	1 Mi.
RURAL DIVIDED	1' Portable 7' Post	2 Mi.

 Channelizer Cone or Drum	 Protective Vehicle
 Sign	 Truck Mounted Attenuator (TMA)
 Truck or Trailer Mounted Arrow Panel	 Work Space

Notes:

In addition to shoulder work, this typical application is applicable to work beyond shoulder where vehicles and equipment are parked on the shoulder.

A protective vehicle **shall** be used while work is in progress. The protective vehicle **should** be equipped with TMA and positioned at least 150 ft. in advance of the work space.

If encroachment onto driving surface occurs and there is not 10 ft. of driving surface available for the lane of traffic, that traffic lane **shall** be closed. Refer to appropriate lane closure typical applications.

If an arrow panel is used for an operation on the shoulder, the caution mode **shall** be displayed.

For short duration or mobile operations, signs, channelization devices and protective vehicles **may** be reduced or eliminated if a work vehicle with activated rotating lights or strobe lights is used. However, if limited sight distance exists in a stationary operation or workers are on foot, a protective vehicle **should** be used. This protective vehicle **should** be equipped with a TMA and truck mounted flashing arrow panel and positioned at least 150 ft. in advance of the work space or work vehicle, as applicable. If a protective vehicle is used, a vehicle mounted sign **shall** be mounted at a recommended height of 48 in. above the road surface.

For work beyond shoulder, where vehicles and equipment are parked on the shoulder, the protective vehicle **may** be eliminated if a work vehicle with activated rotating lights or strobe lights is used.

Additional warning signs **shall** be erected at each intersection with another state highway within the work zone. Upon the discretion of the supervisor, additional warning signs **may** be erected at other intersections within the work zone.

Other appropriate signs **may** be used in lieu of SHOULDER WORK AHEAD sign.

